

The eight hundred and fourteenth meeting of the Club was held on Tuesday 26 November 1991 in the Senior Common Room, Sherfield Building, Imperial College, South Kensington at 6.15 p.m. 35 members and 23 guests attended.

Members attending were: R. E. F. PEAL (*Chairman and Speaker*), M. A. ADCOCK, Miss H. BAKER, B. H. BECK, P. J. BELMAN, P. J. BULL, Dr J. BYNON, I. COLLINS, D. R. CALDER, Cdr M. B. CASEMENT, RN Retd, Dr R. CHEKE, P. J. CONDER, A. GIBBS, Rev. T. W. GLADWIN, D. GRIFFIN, C. A. R. HELM, K. W. HENSHALL, R. H. KETTLE, I. T. LEWIS, Dr J. MELDRUM, Dr J. F. MONK, Mrs A. M. MOORE, R. G. MORGAN, Mrs M. MULLER, P. J. OLIVER, J. G. PARKER, R. G. PRICE, A. J. RANDALL, P. REDMAN, M. L. R. ROMER, Dr R. SELF, N. H. F. STONE, M. P. WALTERS, C. WHEELER, M. W. WOODCOCK.

Guests attending were: Mrs B. ADCOCK, Mrs H. BULL, Professor T. BYNON, Professor R. CHANDLER, Mrs E. CHANDLER, J. CRYER, J. FISHER, Mrs L. FISHER, Mrs J. M. GLADWIN, Mrs S. GRIFFIN, Mrs B. HAMMOND, D. HARRIS, Miss K. HOFF, Ms M. HUNT, Dr H. MELDRUM, Mrs D. MONK, P. J. MOORE, R. NEWTON, Mrs E. NEWTON, Mrs M. OLIVER, Mrs B. PEAL, Mrs M. PRICE, Mrs B. J. WOODCOCK.

New distributional information on Mexican birds. I. The Sierra de Atoyac, Guerrero

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Ornithologists have studied Mexican birds for several centuries, with the earliest scientific treatments dating from about 1570 (Trabulse 1983). Nevertheless, much remains to be learned about the distribution, biology, status and ecology of the Mexican avifauna (Escalante *et al.*, in press). Many biologically important areas and habitats remain largely unexplored due to remoteness or difficulty of access. This paper represents the first of an intended series of reports on new information on Mexican birds gained as a result of surveys and collecting efforts by ourselves and our colleagues.

The avifauna of the Sierra Madre del Sur of Guerrero has been studied intensively during the past 120 years. The first explorations of the region were by collectors working for Salvin & Godman (1879–1904). Subsequently, information was reported by Nelson (1903), Griscom (1934, 1937), Berlioz (1937), Martin del Campo (1948), Blake (1950) and Goldman (1951). Wilmot W. Brown, a professional collector, spent many years in the vicinity of Chilpancingo and Omiltemi (often misspelled Omilteme), assembling large series of most species present. More recent studies in the Omiltemi area have yielded a few additions to the avifauna and detailed ecological information on most species present (Navarro & Escalante, in prep.).

Omiltemi and most of the other old collecting localities are located on the drier, interior slopes of the Sierra Madre del Sur. The avifauna of the more humid, coastal slopes of the mountain range, however, remains largely unknown. Collectors in the employ of Robert T. Moore explored the forests between the lowland city of Atoyac de Alvarez and the highest peak in the region, Cerro Teotepec, discovering the Short-crested

Coquette *Lophornis brachylopha* (Moore 1949, Banks 1990), as well as several other new forms (Friedmann *et al.* 1950, Miller *et al.* 1957). Besides these specimens, many of which carry incomplete locality data, little is known of the area's avifauna. In this paper, we present new distributional information on populations of four species newly discovered in the area during seven years of work in the Sierra de Atoyac. Data on altitudinal distributions are given in Navarro (1986, and in press); and an apparently new species of *Cypseloides* swift collected in the region will be described in detail elsewhere (Navarro *et al.*, in prep.).

Two of us (AGNS and PEP, later joined by ATP) began working in the Sierra de Atoyac in 1983. Work was concentrated along an altitudinal transect from the city of Atoyac de Alvarez to near the peak of Cerro Teotepec, at altitudes from 600 to 3100 m. The base of the transect lies in semideciduous tropical forest, above which is cloud forest, humid pine-oak forest, and finally fir forest. On 17 trips totalling 90 field days, we assembled a list of 162 species. Three of these proved to be considerable range extensions and new records for the state of Guerrero, and one other provided a definite record for a species formerly of doubtful status in the state. Below, we describe briefly information on these populations, presenting comparisons with specimens from other geographic areas. Throughout, we refer to the collections of the Museo de Zoología, Facultad de Ciencias, Universidad Nacional Autónoma de México, the Instituto de Biología, UNAM, and the Museum of Zoology, University of Michigan, as MZFC, IBUNAM, and UMMZ, respectively.

EYE-RINGED FLATBILL *Rhynchocyclus brevirostris*

This species ranges from Colombia and Ecuador north to Puebla and Veracruz on the Atlantic slope, and southern Oaxaca on the Pacific slope (A.O.U. 1983, Binford 1989). The nominate subspecies is found in eastern and southern Mexico, and the subspecies *pallidus* is known from the Sierra de Yucuyacua and the Sierra de Miahuatlán of Oaxaca (Binford 1965). Three specimens (MZFC 5870, IBUNAM 7335, 7336) have been collected from the Sierra de Atoyac of Guerrero, including one male and two females. Two of these were collected in semideciduous tropical forest at Arroyo Grande, 13 km NE of Paraiso, and the third was taken in cloud forest near the ranch called Retrocesos.

Comparisons of plumage colouration with representatives of other populations of this species indicate that the Guerrero population is indistinguishable from populations of southern Oaxaca (*pallidus*), and differs from specimens from Veracruz and Chiapas (*brevirostris*) in having a paler breast and upper throat (as in Binford 1965). Measurements of several characters (Table 1), though based on small sample sizes, indicate no significant differences among populations from Guerrero, southwestern and southern Oaxaca, and southern Chiapas.

OLIVACEOUS WOODCREEPER *Sittasomus griseicapillus*

This species ranges widely in South America, north through Central America to San Luis Pososí and southwestern Tamaulipas on the Atlantic slope (Miller *et al.* 1957), and west to the Sierra de Miahuatlán on the Pacific slope of Oaxaca (Binford 1989). Populations on the Pacific slope in Jalisco and Nayarit are thought to be geographically isolated (Miller *et al.*

1957, Grant 1964, Escalante 1988). Nine specimens in the collections of MZFC and IBUNAM now document the presence of this species in semideciduous tropical forest in the Sierra de Atoyac. The series includes five males and four females, eight of which were obtained at Arroyo Grande, 13 km NE of El Paraiso, and one at El Faisanal. Recent records indicate that populations exist on the coastal slopes of Michoacán (L. and F. Villaseñor, pers. comm.). Given the discovery of populations intermediate between the supposedly disjunct populations of southern Oaxaca and Jalisco, we predict that additional work will document populations of the species continuously along the Pacific slope of Mexico from Oaxaca through Nayarit.

Comparisons of plumage colouration of the Guerrero population with that of populations to the northwest and east indicate few characters distinguishing *jaliscensis* of Jalisco from populations of southern Oaxaca and eastern Mexico. Measurement data for the Guerrero population are overall more similar to the populations of Jalisco than to those of Oaxaca and Chiapas (Table 1): populations of Guerrero and Jalisco have consistently longer beaks, wings and tails than populations to the southeast.

GOLDEN-CROWNED WARBLER *Basileuterus culicivorus*

This species is known from Tamaulipas and Nuevo León on the Atlantic slope, and southeastern Oaxaca on the Pacific slope, south to northern Argentina (Miller *et al.* 1957). Populations from Nayarit south to Colima (Miller *et al.* 1957, Schaldach 1963, Escalante 1988) and on the Pacific slope of Oaxaca (Phillips 1966) are thought to be disjunct isolates. Twenty-one specimens in the collections of the MZFC and IBUNAM document the existence of populations in the Sierra de Atoyac between 600 and 1400 m altitude in semideciduous tropical forest and the lower reaches of cloud forest. Given the habitat usage of the species, which includes disturbed habitats, we predict the presence of continuous populations along the entire Pacific slope of Mexico, especially in the foothills of coastal Michoacán.

Comparisons of colouration, especially of the yellow crown stripe, suggest that the Guerrero population falls into an overall cline from brighter and yellower in the northwest to duller with greater orange suffusion in eastern and southern populations. Individual variation apparently related to age, however, is strong, with geographic differences apparent only in the frequency of pure, broad, yellow crown stripes. We consider division of this subtle clinal variation (formerly known from the terminal populations only) into subspecies (Phillips 1966) unnecessary, because the overall level of differentiation is at best slight. Measurement data (Table 1) indicate little geographic variation in size and shape, other than slight clines towards increasing wing and tail length in northwestern populations.

LONG-BILLED STARTRHOAT *Heliomaster longirostris*

This species is known from Bolivia and central Brazil north to Veracruz on the Atlantic slope and western Oaxaca on the Pacific slope (Friedmann *et al.* 1950, Binford 1989). Although the species is listed for Guerrero by Friedmann *et al.* (1950), its status in Guerrero is recorded as doubtful by

TABLE 1

Measurements of populations of the four species along the Pacific slope of Mexico and Guatemala. Measurements (mm) are bill length from anterior edge of nostril, tarsus length, wing chord, and tail length. Feather characters (wing and tail) were not measured on some individuals due to wear of the plumage

Population	Sex	n	Bill	Tarsus	Wing	Tail
<i>Heliomaster longirostris</i>						
Guerrero	M	5	30.86±1.65	—	59.5±2.6	37.4±1.2
Oaxaca	M	1	31.25	—	61.2	39.20
Chiapas	M	5	28.68±2.39	—	62.3±2.3	35.8±1.2
Guatemala	M	6	28.88±1.65	—	61.5±1.9	32.0±0.6
<i>Sittasomus griseicapillus</i>						
Jalisco	M	3	10.54±0.35	17.77±0.74	82.6±5.1	82.2±5.3
	F	2	10.14±0.06	17.31±0.03	76.9±0.1	79.6±2.3
Guerrero	M	5	10.26±0.51	19.00±1.31	82.8±1.1	80.6±3.1
	F	4	9.72±0.17	16.84±0.46	75.7±1.0	74.3±1.3
Oaxaca	M	1	9.73	18.19	73.2	76.29
Chiapas	M	3	9.52±0.40	17.85±0.05	80.0±1.0	79.7±2.5
	F	1	9.51	18.88	72.8	74.9
<i>Rhynchocyclus breviostris</i>						
Guerrero	M	1	9.01	19.01	78.0	67.0
	F	2	10.38±0.18	18.76±1.27	64.0±2.8	62.5±0.7
Oaxaca, Yucuyacua	M	2	9.17±0.21	17.98±0.57	77.47	—
Oaxaca, Miahuatlán	M	3	8.48±0.62	18.74±0.39	76.7±5.1	67.0±3.0
	F	4	9.71±0.11	17.79±0.63	73.8±2.1	65.1±0.9
Chiapas	M	6	9.48±0.54	18.98±1.29	81.3±1.2	71.7±3.2
	F	3	9.48±0.74	18.84±0.73	78.7±1.5	68.5±3.5
<i>Basileuterus culicivorus</i>						
Nayarit + Jalisco	M	1	7.35	19.65	60.9	55.0
	F	3	7.11±0.13	19.23±0.33	60.1±1.9	54.0±2.0
Guerrero	M	12	7.30±0.28	19.18±0.67	60.2±1.9	54.5±1.9
	F	9	7.63±0.31	19.21±0.48	57.8±2.3	52.6±1.0
Oaxaca	M	8	7.60±0.25	19.37±0.49	59.4±1.6	53.5±1.2
	F	1	7.59	18.74	57.0	52.0

A.O.U. (1983). The reason for this confusion appears to be frequent misidentification of *longirostris* as the similar species *H. constantii*; for example, a specimen from "Chilpancingo" collected by W. W. Brown (UMMZ 117296), originally identified as *constantii*, is actually *longirostris*. Seven specimens in MZFC and IBUNAM from semideciduous tropical forest (600–1200 m altitude) in the Sierra de Atoyac further document the presence of *longirostris* in the state of Guerrero.

Although Phillips (1966) describes the populations of the Pacific slope of Oaxaca as a separate subspecies (*masulinus*), we see the overall level of differentiation in plumage colouration as slight, and difficult to evaluate based on the small series available. Morphological measurements, however, indicate that the populations of southern Oaxaca and Guerrero have distinctly longer bills and tails than populations below the Isthmus of

Tehuantepec (Table 1). Hence, populations above the Isthmus of Tehuantepec indeed seem to form a group apart from those below.

Discussion

The new distributional records documented above, combined with avifaunal lists presented elsewhere (Navarro 1986, and in prep.), indicate that the avifauna of the Sierra de Atoyac is rich in species restricted to cloud forest and semideciduous tropical forest. A number of holes in species' ranges are filled, indicating that range disjunctions even in a region as well known as southern Mexico may often be due to inadequate representation in collections rather than actual absence of the species in intervening areas. Additional important sight records for the region have been gathered by Steve N. G. Howell and Sophie Webb (pers. comm.), including *Sarcoramphus papa*, *Falco albigularis*, *Spizaetus ornatus*, *S. tyrannus*, *Rostrhamus sociabilis*, *Dromococcyx phasianellus*, *Dendrocolaptes certhia*, *Cyanerpes cyaneus* and *Piranga leucoptera*, as well as several migrant species listed in Howell & Wilson (1990). In general, the need for additional exploration and collection in Mexico is emphasised by the new discoveries resulting from this project.

Of interest to a more general understanding of patterns of differentiation in the Mexican avifauna is the apparent pattern of subspecific variation in the two species treated above that occur in Jalisco, Guerrero, Oaxaca, and areas farther to the south. In both cases, somewhat surprisingly, the Guerrero population is most similar to the Jalisco population, rather than to the closer Oaxaca population. However, both species are found in lowland and foothill forests, so significant barriers may not exist between Guerrero and Jalisco. The generality of these geographic patterns must await more detailed studies of intraspecific differentiation in a wider array of species.

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